NOTE:

A COPY OF ALL REQUIRED PERMITS MUST BE PRESENT DURING ANY WORK ON THIS LOCATION AND PERFORMING WORK AT THIS LOCATION INDICATES THAT THE CONTRACTOR HAS READ AND COMPLIED WITH THE REQUIREMENTS STATED IN THE PERMITS

SIGNATURE:

CROWN CASTLE

SAN FRANCISCO
NODE SF SS01
2530 30TH AVE
SAN FRANCISCO, 94121

BBU POLE
2519 30TH AVE
SAN FRANCISCO, 94121

Call Before you Dig!

811

Know what's **below.**
Call before you dig.
Call 811 Before you Dig!

VICINITY MAP

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE AREAS GOVERNING CODES.

1. STATE ADMINISTRATIVE CODE
2. STATE BUILDING CODE
3. ANSI/EIA-222-F LIFE SAFETY CODE NFPA-101-1990
4. STATE MECHANICAL CODE

CODE COMPLIANCE

PROPERTY INFORMATION

CUSTOMER:	CROWN CASTLE
PROJECT:	RICHMOND
NODE:	NODE SF SS01
LATITUDE:	37.740097
LONGITUDE:	-122.487283
STREET ADDRESS:	2530 30TH AVE
CITY, STATE:	SAN FRANCISCO, 94121
POLE# / TYPE:	110020528 / WOOD STREET LIGHT
RAD CENTER / ANTENNA HEIGHT:	38'-10" TO RAD CENTER 40'-10" TO TOP OF ANTENNA
ANTENNA TYPE:	AMPHENOL ANTENNA
AZIMUTH FOR ANTENNA:	N/A
POWER TO POLE:	EXISTING SECONDARY
POLE ACCESS:	STREET SIDE
POLE LOCATION & DESCRIPTION:	APPROX. 181' FROM S/E C/O ULLOA ST & 30TH AVE.

PROJECT SUMMARY

THIS IS AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY FOR CROWN CASTLE CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON REPLACEMENT AND EXISTING WOODEN POLES IN THE PUBLIC RIGHT OF WAY.

PROJECT DESCRIPTION

INSTALL A NEW TELECOMMUNICATION ANTENNA AND EQUIPMENT BOXES ON REPLACEMENT AND EXISTING WOODEN POLES ON GO95 COMPLIANT STANDOFF BRACKET.
INSTALLATION CONSISTS OF (1) AMPHENOL ANTENNA,
(1) ELECTRICAL METER, (1) RF RADIO ENCLOSURE WITH 2 IONS,
(1) LOW VOLTAGE CONVERSION BOX, (1) BBU, (1) BUS BAR AND (1) DISCONNECT SWITCH.
ANTENNAS, MOUNTING BRACKETS, POLE EXTENSIONS, PVC, CONDUIT, CABLING AND METER TO BE PAINTED BROWN USING ADURABLE PAINT.
CABLING TO BE INSTALLED WITHOUT EXCESS CABLE LOOPS.
SUPPORT EQUIPMENT TO BE CLUSTERED VERTICALLY
FCC MANDATED RF WARNING SIGNAGE ON POLE SHALL FACE OUT TO STREET AND SHUTDOWN PROCEDURE SIGNAGE SHALL BE PLACE INSIDE DISCONNECT SWITCH BOX.
PROPOSED UTILITY LINES BETWEEN EXISTING POINT OF CONNECTION TO BE OVERHEAD.

PROJECT SCOPE

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES

SHEET	DESCRIPTION	REV.
1	TITLE SHEET	6
2	POLE PROFILES I	6
3	POLE PROFILES II	6
4	TYPICALS I	6
5	TYPICALS II	6
6	TYPICALS III	6

SHEET INDEX

CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954-1580

PROJECT INFORMATION:

SAN FRANCISCO
NODE SF SS01
2530 30TH AVE
SAN FRANCISCO, 94121

CURRENT ISSUE DATE:

1/21/2015

PERMIT SUBMISSION:

REV.:	DATE:	DESCRIPTION:	BY:
1	1/6/15	REVISIONS TO DWG	E
2	1/21/15	REVISIONS TO DWG	E
3	2/4/15	REVISIONS TO DWG	E
4	9/3/15	REVISIONS TO DWG	AC
5	11/5/15	REVISIONS TO DWG	EG
6	11/23/15	REVISIONS TO DWG	EG

PLANS PREPARED BY:

HP COMMUNICATIONS INC.
13341 Temescal Cyn. Rd.
Corona, CA. 92883
PHONE: (951) 471-1919

PLANS APPROVED BY:

CROWN CASTLE

REP:

COMMENTS:

SHEET TITLE:

TITLE SHEET

SHEET NUMBER: 1

REVISION: 6

MAKE READY

N/A

NEW CONSTRUCTION

CONSTRUCTION:

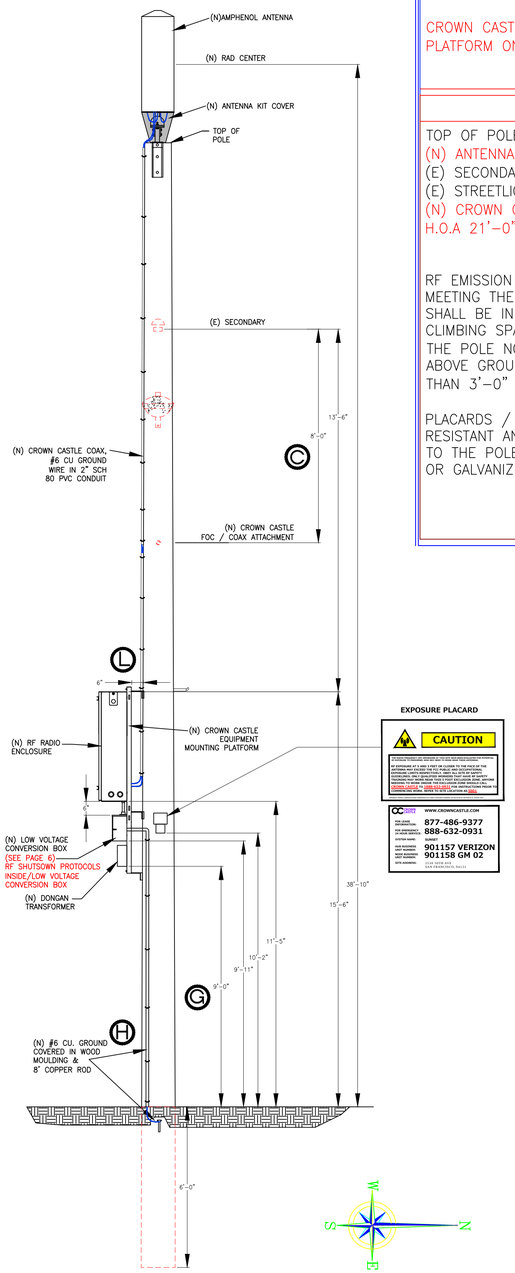
CROWN CASTLE TO ATTACH (N) EQUIPMENT PLATFORM ON POLE @ 8'–4" AGL.

NOTES:

TOP OF POLE 36'–0"
(N) ANTENNA RAD CENTER: 38'–10"
(E) SECONDARY POWER: 29'–0"
(E) STREETLIGHT: 25'–5"
(N) CROWN CASTLE FOC & COAX H.O.A 21'–0"

RF EMISSION PLACARDS / SIGNAGE MEETING THE FCC REQUIREMENTS SHALL BE IN A LOCATION VISIBLE FROM CLIMBING SPACE AND BE AFFIXED TO THE POLE NO LOWER THAN 9'–0" ABOVE GROUND LINE & NO HIGHER THAN 3'–0" BELOW THE ANTENNA.

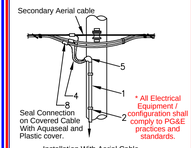
PLACARDS / SIGNAGE ARE UVA RESISTANT AND SHALL BE ATTACHED TO THE POLE WITH GALVANIZED NAILS OR GALVANIZED SCREWS.



Ⓐ	– 72" MIN. CLEARANCE BETWEEN SECONDARY POWER AND CLOSEST LEVEL OF ANTENNA ASSEMBLY.
Ⓑ	– POLE TOP EXTENSION UPPER AND LOWER BRACKET STEPS ARE TO BE INSTALLED WITH THE POLE TOP EXTENSION BRACKET ASSEMBLY, STEPS ARE NOT TO BE INSTALLED ON WOOD EXTENSION BAYONET.
Ⓒ	– 72" MIN CLEARANCE REQ'D.
Ⓓ	– 24" SPACING MAX. (GALVANIZED PIPE STRAP)
Ⓔ	– 72" MIN. TO SECONDARY LEVEL.
Ⓕ	– 12" MIN. SPACING FOR EQUIP TO CURB.
Ⓖ	– 15' MIN. (MAY BE REDUCED TO 9' WHEN NOT EXPOSED TO TRAFFIC).
Ⓗ	– GROUND INSTALLED BY COMM COMPANY (INCLUDES 8' COPPER ROD).
Ⓘ	– 24" MIN. FROM CENTER OF POLE
Ⓙ	– 24" MIN. CLEARANCE REQ'D.
Ⓚ	– 7' MIN. / 8' MAX. REQ'D.
Ⓛ	– 4" MIN. CLEARANCE BETWEEN EQUIPMENT AND POLE.
Ⓜ	– PROTECTIVE COVERING MUST EXTEND A MINIMUM OF 3'–0" BEYOND ENERGIZED 0–750 VOLTS.
Ⓝ	– POLE STEPS TO BE INSTALLED FROM 8'–6" ABOVE GRADE TO NEXTG ATTACHMENT.

0'–0" 1'–0" 2'–0"

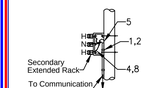
SCALE:		
3/8"=1'	UTILITY POLE DETAIL POLE# 110020528	LOOKING WEST A



* All Electrical Equipment / configuration shall comply to PG&E practices and standards.

Installation With Aerial Cable Secondary

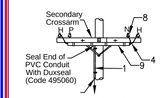
#1) PVC CONDUIT	#6) N/A
#2) GALVANIZED PIPE STRAP	#7) N/A
#3) N/A	#8) INSULATORS
#4) COVERED CABLE	#9) PVC CONDUIT W / DUXSEAL
#5) WEATHER HEAD	



Installation With Extended Rack Secondary

#1) PVC CONDUIT	#6) N/A
#2) GALVANIZED PIPE STRAP	#7) N/A
#3) N/A	#8) INSULATORS
#4) COVERED CABLE	#9) PVC CONDUIT W / DUXSEAL
#5) WEATHER HEAD	

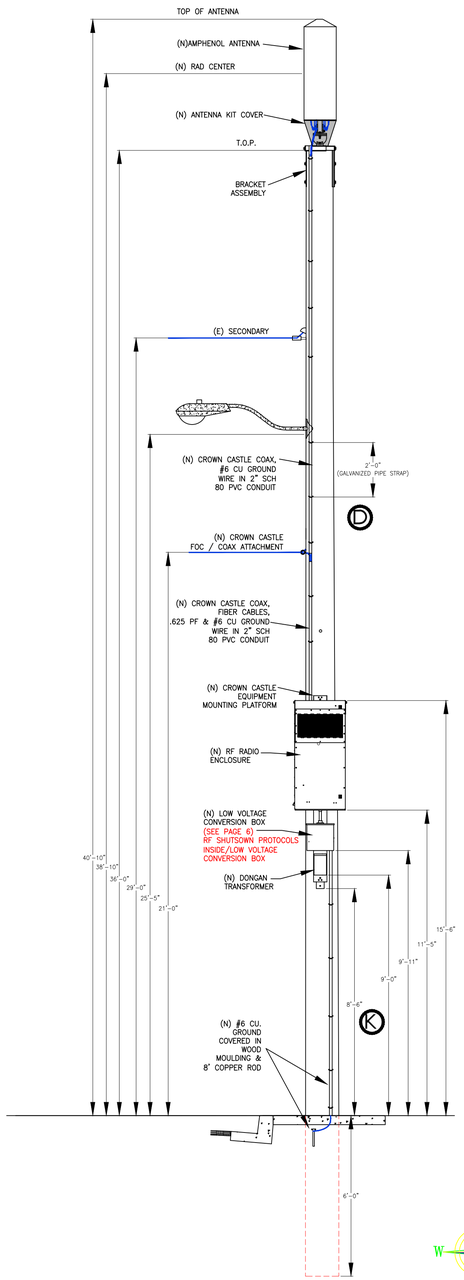
* All Electrical Equipment / configuration shall comply to PG&E practices and standards.

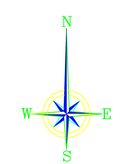


Installation With Crossarm Secondary

#1) PVC CONDUIT	#6) N/A
#2) GALVANIZED PIPE STRAP	#7) N/A
#3) N/A	#8) INSULATORS
#4) COVERED CABLE	#9) PVC CONDUIT W / DUXSEAL
#5) WEATHER HEAD	

* All Electrical Equipment / configuration shall comply to PG&E practices and standards.





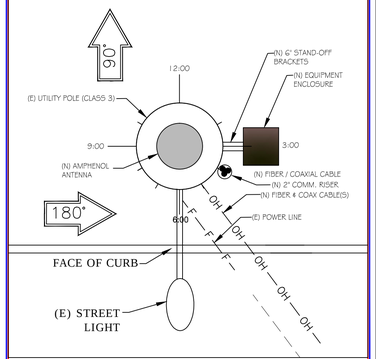
0'–0" 1'–0" 2'–0"

SCALE:		
3/8"=1'	UTILITY POLE DETAIL POLE# 110020528	LOOKING NORTH B

SCALE:		
N.T.S.	SITE POLE PICTURE	C

POLE WILL BE STEPPED IN ACCORDANCE TO GO95 STANDARDS IN RESPECT TO CLIMBING SPACE.

REMOTE EQUIPMENT @ 3:00
1–2" CROWN CASTLE RISER @ 4:00



SCALE:		
N.T.S.	POLE# 110020528 RISER POLE DETAIL	D

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954–1580

PROJECT INFORMATION:

SAN FRANCISCO
NODE SF SS01
2530 30TH AVE
SAN FRANCISCO, 94121

CURRENT ISSUE DATE:

1/21/2015

PERMIT SUBMISSION:

REV.:	DATE:	DESCRIPTION:	BY:
1	1/6/15	REVISIONS TO DWG	E
2	1/21/15	REVISIONS TO DWG	E
3	2/4/15	REVISIONS TO DWG	E
4	9/3/15	REVISIONS TO DWG	AC
5	11/5/15	REVISIONS TO DWG	EG
6	11/23/15	REVISIONS TO DWG	EG

PLANS PREPARED BY:

HP COMMUNICATIONS INC.
13341 Temescal Cyn. Rd.
Corona, CA. 92883
PHONE: (951) 471–1919

PLANS APPROVED BY:

CROWN CASTLE

REP:

COMMENTS:

Call Before you Dig!
811
Know what's **below.**
Call before you dig.
Call 811 Before you Dig!

SHEET TITLE:

POLE PROFILES

SHEET NUMBER: 2 REVISION: 6

2 OF 6

MAKE READY

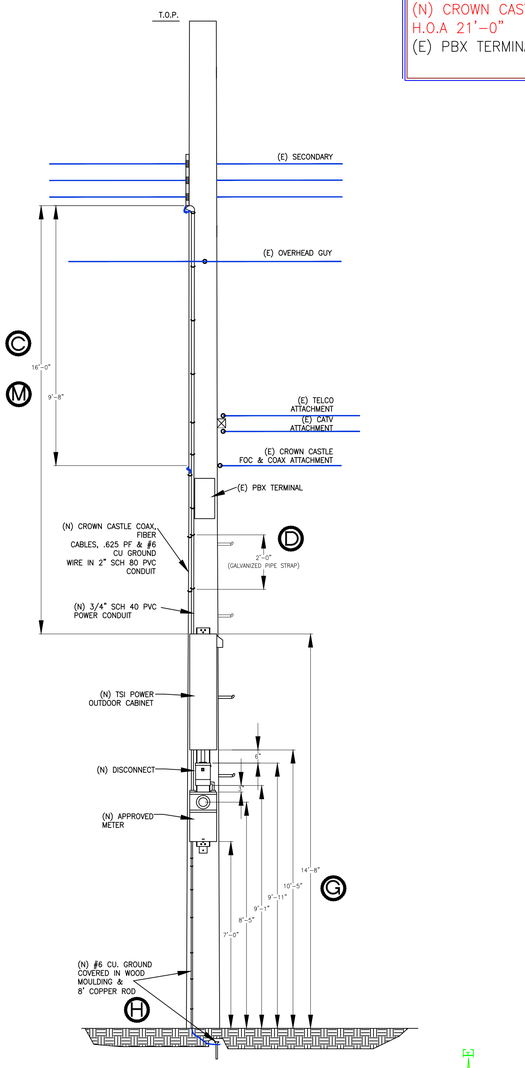
N/A

NEW CONSTRUCTION

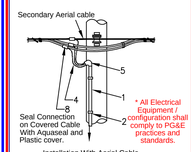
CONSTRUCTION:
CROWN CASTLE TO ATTACH (N) EQUIPMENT PLATFORM ON POLE @ 6'–2" AGL.

NOTES:

TOP OF POLE 37'–6"
(E) SECONDARY POWER: 30'–8"
(E) OVERHEAD GUY: 28'–7"
(E) CATV & TELCO CBL ARMS: 22'–3"
(N) CROWN CASTLE COAX
H.O.A 21'–0"
(E) PBX TERMINAL: 19'–0"



Secondary Aerial cable

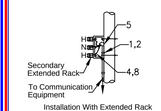


Seal Connection on Covered Cable With Aquaseal and Plastic cover.

* All Electrical Equipment / configuration shall comply to PG&E practices and standards.

Installation With Aerial Cable Secondary

#1) PVC CONDUIT
#2) GALVANIZED PIPE STRAP
#3) N/A
#4) COVERED CABLE
#5) WEATHER HEAD
#6) N/A
#7) N/A
#8) INSULATORS
#9) PVC CONDUIT W / DUXSEAL



Secondary Extended Rack

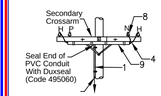
To Communication Equipment

Installation With Extended Rack Secondary

#1) PVC CONDUIT
#2) GALVANIZED PIPE STRAP
#3) N/A
#4) COVERED CABLE
#5) WEATHER HEAD
#6) N/A
#7) N/A
#8) INSULATORS
#9) PVC CONDUIT W / DUXSEAL

* All Electrical Equipment / configuration shall comply to PG&E practices and standards.

Secondary Crossarm

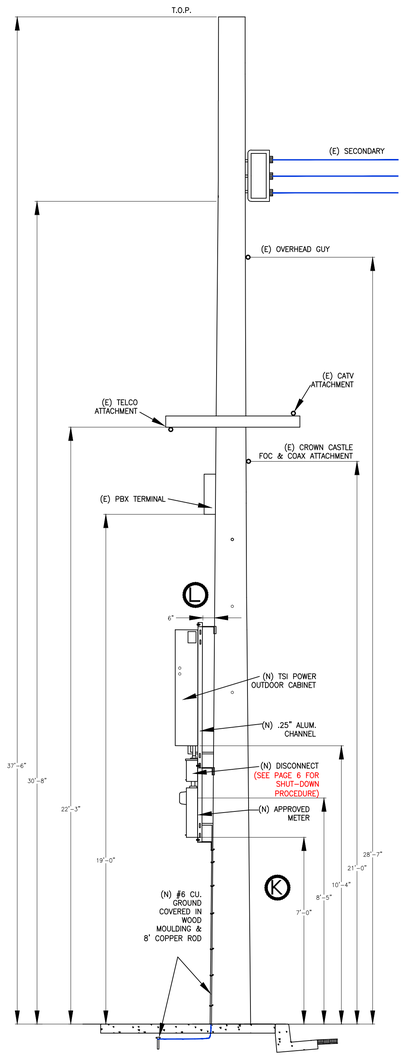


Seal End of PVC Conduit With Duxseal (Code 495060)

Installation With Crossarm Secondary

#1) PVC CONDUIT
#2) GALVANIZED PIPE STRAP
#3) N/A
#4) COVERED CABLE
#5) WEATHER HEAD
#6) N/A
#7) N/A
#8) INSULATORS
#9) PVC CONDUIT W / DUXSEAL

* All Electrical Equipment / configuration shall comply to PG&E practices and standards.



Ⓐ – 72" MIN. CLEARANCE BETWEEN SECONDARY POWER AND CLOSEST LEVEL OF ANTENNA ASSEMBLY.

Ⓑ – POLE TOP EXTENSION UPPER AND LOWER BRACKET STEPS ARE TO BE INSTALLED WITH THE POLE TOP EXTENSION BRACKET ASSEMBLY. STEPS ARE NOT TO BE INSTALLED ON WOOD EXTENSION BAYONET.

Ⓒ – 72" MIN CLEARANCE REQ'D.

Ⓓ – 24" SPACING MAX. (GALVANIZED PIPE STRAP)

Ⓔ – 72" MIN. TO SECONDARY LEVEL.

Ⓕ – 12" MIN. SPACING FOR EQUIP TO CURB.

Ⓖ – 15' MIN. (MAY BE REDUCED TO 9' WHEN NOT EXPOSED TO TRAFFIC).

Ⓗ – GROUND INSTALLED BY COMM COMPANY (INCLUDES 8' COPPER ROD).

Ⓘ – 24" MIN. FROM CENTER OF POLE

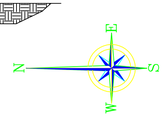
Ⓙ – 24" MIN. CLEARANCE REQ'D.

Ⓚ – 7' MIN. / 8' MAX. REQ'D.

Ⓛ – 4" MIN. CLEARANCE BETWEEN EQUIPMENT AND POLE.

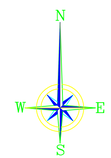
Ⓜ – PROTECTIVE COVERING MUST EXTEND A MINIMUM OF 3'–0" BEYOND ENERGIZED 0–750 VOLTS.

Ⓝ – POLE STEPS TO BE INSTALLED FROM 8'–6" ABOVE GRADE TO NEXTG ATTACHMENT.



0'–0" 1'–0" 2'–0"

SCALE:			
3/8"=1'	UTILITY POLE DETAIL POLE# 110020527	LOOKING EAST	A



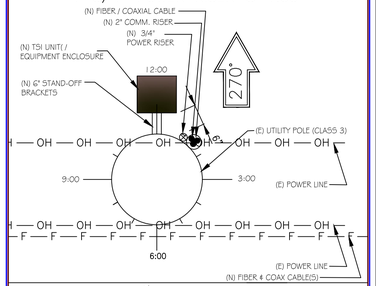
0'–0" 1'–0" 2'–0"

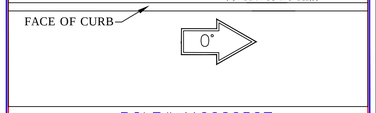
SCALE:			
3/8"=1'	UTILITY POLE DETAIL POLE# 110020527	LOOKING NORTH	B

SCALE: N.T.S.	SITE POLE PICTURE	C

POLE WILL BE STEPPED IN ACCORDANCE TO GO95 STANDARDS IN RESPECT TO CLIMBING SPACE.

1–2" CROWN CASTLE RISER @ 1:00
TSI EQUIPMENT @ 12:00
1–3/4" POWER RISER @ 1:00





POLE# 110020527

SCALE: N.T.S.	RISER POLE DETAIL	D

Product Specifications

COMMSCOPE

POWERED BY ANDREW

UGBKIT-0210-T
Tinned Copper Ground Buss Bar, 1/4 in x 2 in x 10 in (6.4 mm x 50.8 mm x 254.0 mm)

Dimensions

Height	50.80 mm | 2.00 in
Length	254.00 mm | 10.00 in
Hole Size	7/16 in | 7/16 in x 5/8 in

General Specifications

Material Type	Tinned copper
Hole Distance, center to center	19.05 mm | 3/4 in
Includes	Angle adapters | Grounding bar | Insulators | Mounting brackets | Universal hardware
Package Quantity	1

Mechanical Specifications

Material Thickness	6.350 mm | 1/4 in

Packed Dimensions

Height	406.4 mm | 16.0 in
Length	63.5 mm | 2.5 in
Shipping Weight	1.81 kg | 4.00 lb
Width	381.0 mm | 15.0 in

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

SCALE: N.T.S.	BUSS–BAR SPECIFICATIONS	E

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954–1580

PROJECT INFORMATION:

SAN FRANCISCO
NODE SF SS01
2519 30TH AVE
SAN FRANCISCO, 94121

CURRENT ISSUE DATE:

1/21/2015

PERMIT SUBMISSION:

REV.:	DATE:	DESCRIPTION:	BY:
1	1/6/15	REVISIONS TO DWG	E
2	1/21/15	REVISIONS TO DWG	E
3	2/4/15	REVISIONS TO DWG	E
4	9/3/15	REVISIONS TO DWG	AC
5	11/5/15	REVISIONS TO DWG	EG
6	11/23/15	REVISIONS TO DWG	EG

PLANS PREPARED BY:

HP COMMUNICATIONS INC.

13341 Temescal Cyn. Rd.
Corona, CA. 92883
PHONE: (951) 471–1919

PLANS APPROVED BY:

CROWN CASTLE

REP:

COMMENTS:

Call Before you Dig!
811
Know what's below.
Call before you dig.
Call 811 Before you Dig!

SHEET TITLE:

POLE PROFILES II

SHEET NUMBER: 3 REVISION: 6

3 OF 6

ANDREW.
A CommScope Company

ION-M7P/85P/17P/19P

PCS1900

Frequency range, MHz

Uplink	1850 to 1915
Downlink	1930 to 1995

Output power per carrier, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40*	37	34
UMTS	43	40	37	34

DL output tolerance over frequency, dB ±1
DL output tolerance over temperature, dB ±0.5

Spectrum emission mask <-13 dBm / 1 MHz

Input ICP3, dBm**

ICP3 optimized	-12 min
Noise figure optimized	-18 min

Noise figure, dB**

ICP3 optimized	+11
Noise figure optimized	+6

System Supervision and Control

Commands: RF on/off; 4 external control ports

Alarms: Summary; Power Supply; Optical UL and DL failure; RF UL and DL failure; Temperature; 4 external alarm inputs

Supervision: Composite output power

Mechanical***

Height, width, depth, mm (in) 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

Environmental

Operating temperature range, °C -33 to +50

Ingress protection

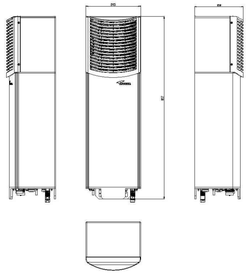
RF port	IP67
Fan port	IP55

* 3 dB reduction of Pout @ carrier bandwidth < 5 MHz

** from Reference point B to A

*** Spacing required 40 mm (1.58 in) around unit

All figures are typical values, unless otherwise stated.



Cabinet of ION-M7P/85P/17P/19P Remote Unit

Electrical

Power Supply
Mains power, Vac 115 or 230
Power consumption, Watts 1050

Optical

Optical Link
Connectors E2000/APC 8°
Optical return loss, dB 45
Fibre type Single mode E9/125 µm
Optical link budget, dB 0 to 10

Composite input power @ OTRx master side, dBm

700 MHz	3.0 nominal
CELL850	3.0 nominal
AWS1700/2100	3.0 nominal
PCS1900	3.0 nominal

Interface

BTS Side (SMA)
Number of connectors: Standard
700 MHz 4
CELL850 4
AWS1700/2100 4
PCS1900 4

System optimized for BTS power, dBm 33; 46

Commercial 700 MHz

Frequency range, MHz

Uplink	698 to 716
Uplink	776 to 787
Downlink	728 to 757

Output power per carrier, dBm

Number of Carriers	1	2	4	8
LTE	43	40*	37	34

DL output tolerance over frequency, dB ±1
DL output tolerance over temperature, dB ±0.5

Spurious emission <-13 dBm / 1 MHz

Input ICP3, dBm**

ICP3 optimized	-11 min
Noise figure optimized	-18 min

Noise figure, dB**

ICP3 optimized	+10
Noise figure optimized	+6

LMR850

Frequency range

Uplink AMPS	824 to 849
Downlink AMPS	869 to 894

Output power per carrier, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40*	37	34
UMTS	43	40	37	34

DL output tolerance over frequency, dB ±1
DL output tolerance over temperature, dB ±0.5

Spurious emission <-13 dBm / 1 MHz

Input ICP3, dBm**

ICP3 optimized	-11 min
Noise figure optimized	-18 min

Noise figure, dB**

ICP3 optimized	+10
Noise figure optimized	+6

AWS1700/2100

Frequency range, MHz

Uplink	1710 to 1755
Downlink	2110 to 2155

Output power per carrier, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40*	37	34
UMTS	43	40	37	34

DL output tolerance over frequency, dB ±1
DL output tolerance over temperature, dB ±0.5

Spurious emission <-13 dBm / 1 MHz

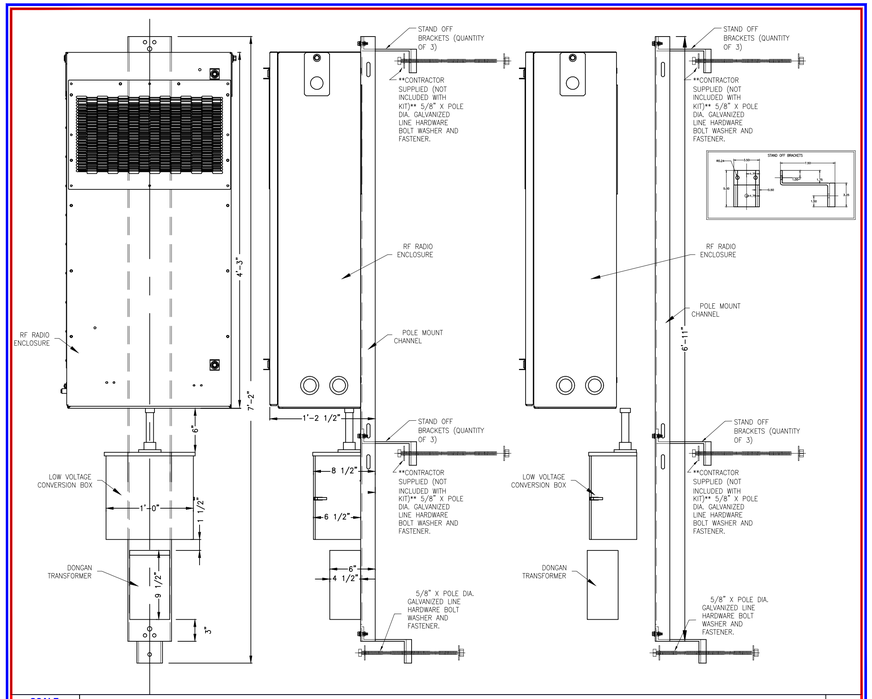
Input ICP3, dBm**

ICP3 optimized	-12 min
Noise figure optimized	-18 min

Noise figure, dB**

ICP3 optimized	+11
Noise figure optimized	+6

SCALE:		
N.T.S.	REPEATER EQUIPMENT SPECIFICATIONS #1	A



SCALE:		
N.T.S.	REPEATER EQUIPMENT AND MOUNTING CHASSIS CONFIGURATION	B

ANDREW.
A CommScope Company

ION-M7P/17P

Electrical

Power Supply
Mains power, Vac 85 to 264; 115 or 230
Power consumption, watts
max. temp, fully loaded 550
room temp, idle 300

Optical Link

Optical Link
Connectors E2000/APC 8°
Optical return loss, dB 45
Fibre type Single mode E9/125 µm
Optical link budget, dB 0 to 10
Composite input power @ OTRx master side, dBm
700 MHz 3.0 nominal
AWS1700/2100 3.0 nominal

RF Interface

BTS Side (SMA)
Number of connectors: Standard
700 MHz 4
AWS1700/2100 4

System optimized for BTS power, dBm 33; 46

Commercial 700 MHz

Frequency range, MHz

Uplink	698 to 716
Uplink	776 to 787
Downlink	728 to 757

Output power per carrier, dBm

Number of Carriers	1	2	4	8
LTE	43	40*	37	34

DL output tolerance over frequency, dB ±1
DL output tolerance over temperature, dB ±0.5

Spurious emission <-13 dBm / 1 MHz

Input ICP3, dBm**

ICP3 optimized	-11 min
Noise figure optimized	-18 min

Noise figure, dB**

ICP3 optimized	+10 max
Noise figure optimized	+6 max +4.5 typical

AWS1700/2100

Frequency range, MHz

Uplink	1710 to 1755
Downlink	2110 to 2155

Output power per carrier, dBm

Number of Carriers	1	2	4	8
CDMA	43	40	37	34
LTE	43	40*	37	34
UMTS	43	40	37	34

DL output tolerance over frequency, dB ±1
DL output tolerance over temperature, dB ±0.5

Spurious emission <-13 dBm / 1 MHz

Input ICP3, dBm**

ICP3 optimized	-12 min
Noise figure optimized	-18 min

Noise figure, dB**

ICP3 optimized	+11 max
Noise figure optimized	+6 max +4.5 typical

System Supervision and Control

Commands: RF on/off; 4 external control ports

Alarms: Summary; Power Supply; Optical UL and DL failure; RF UL and DL failure; Temperature; 4 external alarm inputs

Supervision: Composite output power

Mechanical***

Height, width, depth mm (in) 838 x 156 x 147 (32.7 x 6.1 x 5.8)

Weight, kg (lb) 20 (44)

Environmental

Operating temperature range, °C -33 to +50

Ingress protection

RF port	IP67
Fan port	IP55

Ordering Information

ION-M7P/17P 1086744032

Depending on the selected options and the configuration the ordering material number contains an identifying suffix.

Extension Unit Options

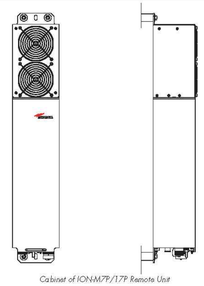
No connection to extension unit possible.

* 2 dB reduction of Pout @ carrier bandwidth < 5 MHz

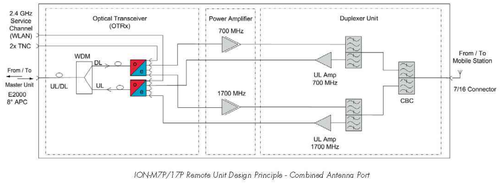
** from Reference point B to A

*** Spacing required 40 mm (1.58 in) around unit

All figures are typical values, unless otherwise stated.

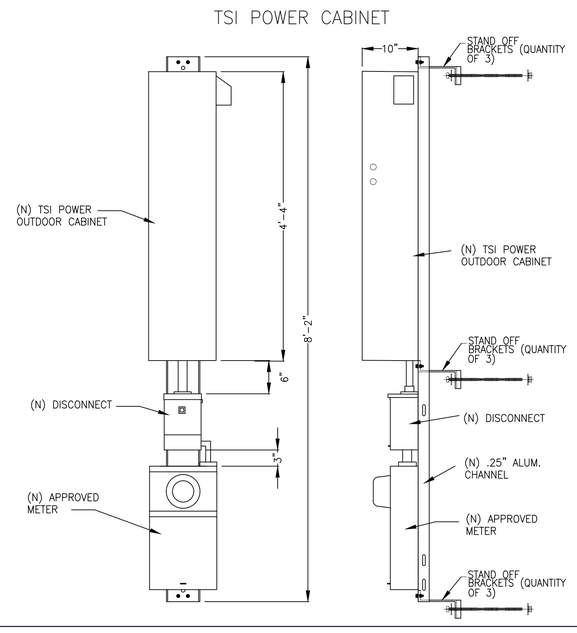


Cabinet of ION-M7P/17P Remote Unit



ION-M7P/17P Remote Unit Design Principle - Combined Antenna Port

SCALE:		
N.T.S.	REPEATER EQUIPMENT SPECIFICATIONS #2	C



SCALE:		
N.T.S.	TSI POWER CABINET CHASSIS CONFIGURATION	D

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954-1580

PROJECT INFORMATION:

SAN FRANCISCO
NODE SF SS01
2530 30TH AVE
SAN FRANCISCO, 94121

CURRENT ISSUE DATE:

1/21/2015

PERMIT SUBMISSION:

REV.:	DATE:	DESCRIPTION:	BY:
1	1/6/15	REVISIONS TO DWG	E
2	1/21/15	REVISIONS TO DWG	E
3	2/4/15	REVISIONS TO DWG	E
4	9/3/15	REVISIONS TO DWG	AC
5	11/5/15	REVISIONS TO DWG	EG
6	11/23/15	REVISIONS TO DWG	EG

PLANS PREPARED BY:

HP COMMUNICATIONS INC.
13341 Temescal Cyn. Rd.
Corona, CA. 92883
PHONE: (951) 471-1919

PLANS APPROVED BY:

CROWN CASTLE

REP:

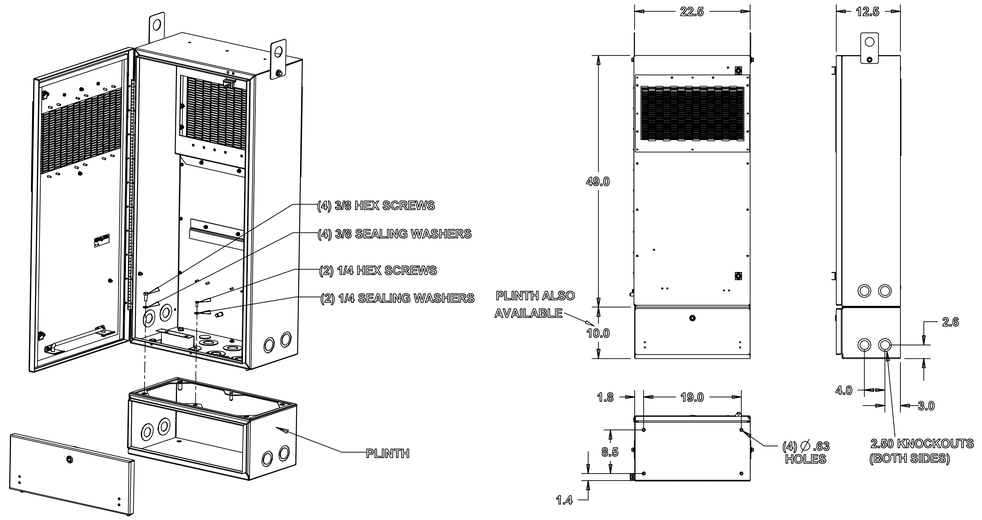
COMMENTS:

SHEET TITLE:

TYPICALS I

SHEET NUMBER: 4 REVISION: 6

4 OF 6

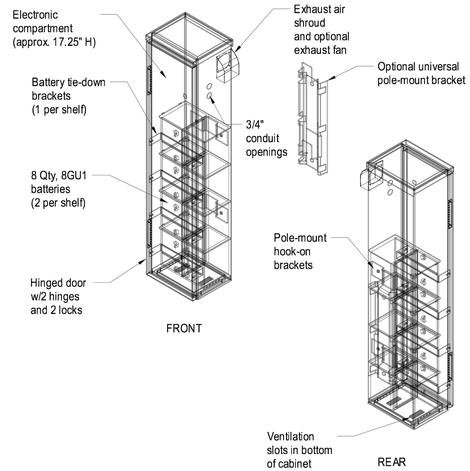


SCALE: N.T.S.

CUBE PLINTH KIT INSTALLATION AND DIMENSIONS

A

Front and Back View of Outdoor XUPS-1200-N8BY Design Concept



HJZ - 12/31/2013

2 Specifications
Outdoor-XUPS-1200-N8BY

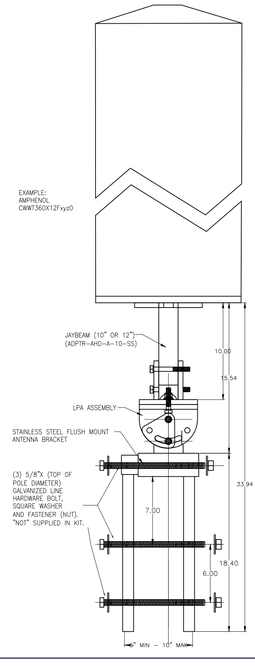
Specification	Outdoor XUPS-1200-N8BY
Input	
Nominal voltage	115 V
Operating voltage	96 - 136 V without transferring to inverter
Current @96 V & max charging	17.8 A
Frequency	47 - 63 Hz
Circuit breaker	20 A two-pole magnetic circuit breaker
Surge voltage test condition	ANSI/IEEE: 6 kV, 1.2 x 50 µs/ 3kA, 8 x 20 µs
Surge voltage let-through	L-N: 450 V L-G: 300 V N-G: 300 V
Output	
Output power	1400 W
Voltage	115 V ± 8%
Circuit breaker	15 A push-to-reset circuit breaker, 0.75 derated at 55° C
Crest factor	3 : 1
Waveform and THD	Sine wave, < 3% THD with linear load
Power efficiency	Line: 97%, Inverter: 92% under full load conditions
Power on/off switch	On / off rocker style power switch
Transfer time	0 to 8 milliseconds
Battery	
Type:	8GU1 MK Battery: MU-1SLDG, 8GU1
Dimensions and weight	7.71" L / 5.18" W / 7.22" H; 23 lbs
Ah @20hr rate and bus voltage	62 Ah, 48 V
Number of batteries	8
Battery circuit breaker	60 A
Temp. range fully charged	-4° to +140° F (-20° to +60° C), -40° to +140° F (-40° to + 60° C) with optional battery heater
Battery heater pad BH 5	34 W four required
Battery backup time vs. load *Depends on condition of battery	1.16 hrs at 1200 W 1 hr at 1400 W 2.6 hrs at 700 W
Recharge time	Temperature compensated charger, charge to 90% capacity after full discharge 18 hours
Indicators and alarms	
LED Status Indicators on control board	Inverter on: Amber; Low battery: Orange after inverter shut down following low batt. after long outage Fault: Red for overload / red blinks for high temp; AC ok: Green when AC in buck, bypass or boost mode
N / O or N / C contacts	>44 V/<44 V / On / off, six position terminal block on control board assembly or DB-9 port
Physical	
Dimensions and volume	W: 12" H: 52" x D: 10" / 3.25 Cubic feet
Aluminum cabinet	Outdoor type, powder coated, rain tested to NEMA 3R UL 50
Input / output connections	3 position terminal block provided for 3 x 12 AWG 1/2" holes for conduit connectors
Weights lbs / kg	Without batteries: 98 lbs, With 8 batteries: 282 lbs
Mounting option	Bolting or banding to wood or steel via optional universal bracket. Bracket part number: ZC00497 (stainless steel mounting bands or through bolts not included)
Environmental	
Operating temperature	14° to +113° F (-10° to +45° C) ambient air temperature
Battery heater option	-40° to +113° F (-40° to +45° C) with optional battery heater
Cooling method	Thermostat controlled exhaust fan
Moisture protection	Conformal coating of electronic boards for moisture resistance
Safety	
Standards	Designed to conform to UL 60950-1 and UL 1778
Warranty	
Warranty	Two-year limited warranty, parts and labor. Manufacturer warranty on batteries.

SP000XX - January 2014

SCALE: N.T.S.

TSI POWER CABINET SPECIFICATIONS

B



SCALE: N.T.S.

POLE TOP ANTENNA KIT 002Y

C

Amphenol ANTENNA SOLUTIONS

696-960 / 1710-2170 / 1710-2170 MHz

CWWT360X12Fxyz0

Tri Band | Tri Sector Pseudo Omni Cylindrical Antenna | XXX-Pol | 360° / 360° / 360° | 6.0 / 10.0 / 10.0 dBi | Fixed Tilt

- Tri band, cylindrical antenna
- Tri sector configuration, Pseudo Omni with 6 connectors
- Ideal for Small Cell / DAS applications
- Can be ordered with a variety of different mounting options
- Also available with internal diplexer and/or GPS system

Ordering Options			
Option A: Mounting Kits	**Mounting Kit Options**	**Model Number**	**Includes**
The CWWT360X12Fxyz0 can be ordered with a variety of different mounting options. Select from Mounting Kit Options shown at right.	Antenna only, no mounting kit	CWWT360X12Fxyz0	---
	Antenna with Side Mounting Pipe Mounting Kit	CWWT360X12Fxyz0S	CWT-MKS-SIDE
	Antenna with Top Mounting Pipe Mounting Kit	CWWT360X12Fxyz0T	CWT-MKS-TOP
	Antenna with Utility Pole Mounting Kit	CWWT360X12Fxyz0U	WB3X-MKS-01
Option B: Painting	**Painting Options**	**Model Number**	**Includes**
The CWWT360X12Fxyz0 can be painted to blend with the structure on which it's mounted. Select from the Painting Options shown at right.	Unpainted (White)	Antenna only, no mounting kit	CWWT360X12Fxyz0	---
		with Side Mounting Pipe Mtg Kit	CWWT360X12Fxyz0S	CWT-MKS-SIDE
		with Top Mounting Pipe Mtg Kit	CWWT360X12Fxyz0T	CWT-MKS-TOP
		with Utility Pole Mounting Kit	CWWT360X12Fxyz0U	WB3X-MKS-01
	Painted Brown	Antenna only, no mounting kit	CWWT360X12Fxyz0BR	---
		with Side Mounting Pipe Mtg Kit	CWWT360X12Fxyz0BRS	CWT-MKS-SIDE
		with Top Mounting Pipe Mtg Kit	CWWT360X12Fxyz0BRT	CWT-MKS-TOP
		with Utility Pole Mounting Kit	CWWT360X12Fxyz0BRU	WB3X-MKS-01
	Painted Gray	Antenna only, no mounting kit	CWWT360X12Fxyz0GR	---
		with Side Mounting Pipe Mtg Kit	CWWT360X12Fxyz0GRS	CWT-MKS-SIDE
		with Top Mounting Pipe Mtg Kit	CWWT360X12Fxyz0GRT	CWT-MKS-TOP
		with Utility Pole Mounting Kit	CWWT360X12Fxyz0GRU	WB3X-MKS-01
	Painted Black	Antenna only, no mounting kit	CWWT360X12Fxyz0BK	---
		with Side Mounting Pipe Mtg Kit	CWWT360X12Fxyz0BKS	CWT-MKS-SIDE
		with Top Mounting Pipe Mtg Kit	CWWT360X12Fxyz0BKT	CWT-MKS-TOP
		with Utility Pole Mounting Kit	CWWT360X12Fxyz0BKU	WB3X-MKS-01

Option C: Electrical Downtilt (xy)

The CWWT360X12Fxyz0 can be ordered with a variety of different fixed Electrical Downtilt configurations.

When ordering, replace the "x" in the model number with the desired electrical downtilt for the 696-960 MHz frequency and replace the "y" in the model number with the desired electrical downtilt for the 1710-2170 MHz range. Select from the options listed under **Electrical Downtilt** on the following page.

Option D: Connector Type (z)

Select the Connector Type for the CWWT360X12Fxyz0.

When ordering, replace "z" in the model number with the desired connector type. Each connector type is designated with a specific letter. For example D = 7/16-DIN Connector. Options are listed on the following page under **Connector Type**.

Additional Antenna Options	
Similar antennas are available with the following features. Please refer to the antenna data sheets for details. Specifications may differ.	
Antenna with Internal Diplexer, but without GPS System	Refer to model number: CWWT360X12Fxyz1
Antenna without Internal Diplexer, but with GPS System	Refer to model number: CWWT360L12Fxyz0
Antenna with Internal Diplexer and with GPS System	Refer to model number: CWWT360L12Fxyz1

Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

REV071414 www.amphenol-antennas.com 1 of 2

SCALE: N.T.S.

ANTENNA SPECIFICATIONS

D

CROWN CASTLE

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954-1580

PROJECT INFORMATION:

SAN FRANCISCO
NODE SF SS01
2530 30TH AVE
SAN FRANCISCO, 94121

CURRENT ISSUE DATE:

1/21/2015

PERMIT SUBMISSION:

REV.:	DATE:	DESCRIPTION:	BY:
1	1/6/15	REVISIONS TO DWG	E
2	1/21/15	REVISIONS TO DWG	E
3	2/4/15	REVISIONS TO DWG	E
4	9/3/15	REVISIONS TO DWG	AC
5	11/5/15	REVISIONS TO DWG	EG
6	11/23/15	REVISIONS TO DWG	EG

PLANS PREPARED BY:

HP COMMUNICATIONS INC.

13341 Temescal Cyn. Rd.
Corona, CA. 92883
PHONE: (951) 471-1919

PLANS APPROVED BY:

CROWN CASTLE

REP:

COMMENTS:

SHEET TITLE:

TYPICALS II

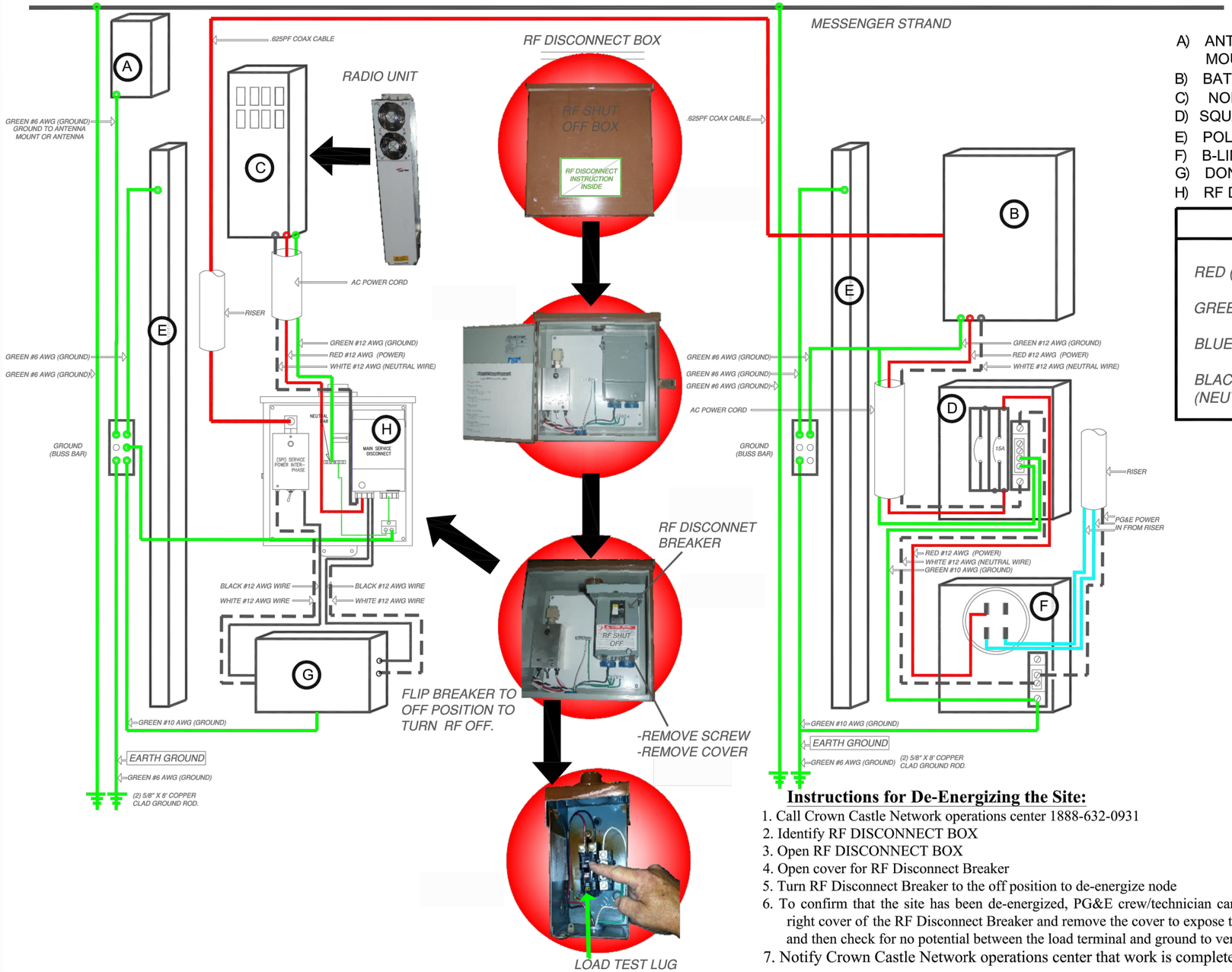
SHEET NUMBER: 5

REVISION: 6

5 OF 6

METERED SITE & BBU ON THE SAME POLE, NODE & ANTENNAS ADJACENT TO THE METER POLE

(DRAWING #3)



A) ANTENNA AND MOUNTING BRACKET
B) BATTERY BACKUP
C) NODE EQUIPMENT
D) SQUARE-D (DISCONNECT BREAKER)
E) POLE MOUNTING CHANNEL
F) B-LINE 114TB METER SOCKET
G) DONGAN TRANSFORMER
H) RF DISCONNECT BOX

COLOR KEY	
RED (POWER)	
GREEN (GROUND)	
BLUE (PG&E POWER)	
BLACK / DASHED (NEUTRAL)	

Instructions for De-Energizing the Site:

1. Call Crown Castle Network operations center 1888-632-0931
2. Identify RF DISCONNECT BOX
3. Open RF DISCONNECT BOX
4. Open cover for RF Disconnect Breaker
5. Turn RF Disconnect Breaker to the off position to de-energize node
6. To confirm that the site has been de-energized, PG&E crew/technician can remove the single screw on the bottom right cover of the RF Disconnect Breaker and remove the cover to expose the source and load terminals on the switch and then check for no potential between the load terminal and ground to verify that no RF signal can be generated.
7. Notify Crown Castle Network operations center that work is complete

SCALE:	SHUT-DOWN PROCEDURE	E
N.T.S.		

CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954-1580

PROJECT INFORMATION:

SAN FRANCISCO
NODE SF SS01
2530 30TH AVE
SAN FRANCISCO, 94121

CURRENT ISSUE DATE: 1/21/2015

PERMIT SUBMISSION:

REV.:	DATE:	DESCRIPTION:	BY:
1	1/6/15	REVISIONS TO DWG	E
2	1/21/15	REVISIONS TO DWG	E
3	2/4/15	REVISIONS TO DWG	E
4	9/3/15	REVISIONS TO DWG	AC
5	11/5/15	REVISIONS TO DWG	EG
6	11/23/15	REVISIONS TO DWG	EG

PLANS PREPARED BY:

HP COMMUNICATIONS INC.
13341 Temescal Cyn. Rd.
Corona, CA. 92883
PHONE: (951) 471-1919

PLANS APPROVED BY: CROWN CASTLE

REP:

COMMENTS:

SHEET TITLE: TYPICALS III

SHEET NUMBER: 6 REVISION: 6

6 OF 6